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#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

olicant: Cantor et al.

Serial No.: Conf. No.:

10/645,816 Unassigned

Customer No.:

24961

Filed:

August 20, 2003

For:

**USE OF NUCLEOTIDE ANALOGS IN** 

THE ANALYSIS OF OLIGONUCLEOTIDE

MIXTURES AND IN HIGHLY MULTIPLEXED NUCLEIC ACID

**SEQUENCING** 

Art Unit:

1634

Examiner:

Unassigned

#### TRANSMITTAL LETTER

Commissioner for Patents

U.S. Patent and Trademark Office

P.O. Box 1450, Alexandria, VA 22313-1450

Sir:

Transmitted herewith are an Information Disclosure Statement, Forms PTO-1449 (3 pages), and cited references for filing in connection with the above-identified application. Because this Information Disclosure Statement is filed prior to receipt of a First Office Action on the merits in the above-referenced application, no fee is due. However, should it be determined that a fee for filing these papers is required, the Commissioner is authorized to charge Deposit Account No. 50-1213, as stated below:

(X)

The Commissioner is hereby authorized to charge any fees that may be due under 37 C.F.R. §§1.16-1.17 in connection with this paper or with this application during its entire pendency to Deposit Account No. 50-1213. A duplicate of this sheet is enclosed.

Respectfully submitted,

HELLER, EHRMAN, WHITE & McAULIFFE LLP

By:

Stephanie L. Seidman Registration No. 33,779

Dated: December 22, 2003

Attorney Docket No.: 25491-2408B Address all correspondence to:

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HELLER, EHRMAN, WHITE & McAULIFFE LLP

4350 La Jolla Village Drive, 7th Floor

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# SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT IN ACCORDANCE WITH 37 C.F.R. §§ 1.97-1.98

Commissioner for Patents U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

#### Dear Sir:

This Supplemental Information Disclosure Statement is filed prior to receipt of a First Office Action on the merits of the above-captioned application. Thus, a fee for filing this statement should not be due. If, however, it is determined that a fee is due, any fees that may be due in connection with filing this paper may be charged to Deposit Account No. 50-1213.

In accordance with the duty of disclosure imposed by 37 C.F.R. §1.56 to inform the Patent Office of all references known by Applicant or Applicant's representative that may be material to the examination of the subject application, Applicant's representative hereby provides this Information Disclosure Statement that is prepared in accordance with 37 C.F.R. §§1.97-1.98. Forms PTO-1449 (3 pages) and copies of the cited documents are provided herewith.

The documents listed on the Forms PTO-1449 are in the English language with the exception of item Q. Item Q (Japanese Patent No. JP63503007), which is in the Japanese language, is provided with English language Derwent abstracts

USSN 10/645,816 CANTOR, et al. Supplemental IDS

(item AE). Hence, in accordance with the requirements of 37 C.F.R. §1.98, as amended effective March 16, 1992, no further explanation of the listed items is necessary.

Although these documents are made known to the Patent and Trademark Office in compliance with Applicant's duty of disclosure, such disclosure is not to be construed as an admission by Applicant or Applicant's representative that any of the references, singly or in any combination thereof, is effective as prior art against the subject application. In accordance with 37 C.F.R. §1.97(h), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. §1.56(b) exists.

Applicant respectfully requests that the Examiner review the foregoing references and information and that they be made of record in the file history of the above-captioned application.

Respectfully submitted,

HELLER, EHRMAN, WHITE & McAULIFFE LLP

By:

Stephanie L. Seidman Registration No. 33,779

Dated: December 22, 2003

Attorney Docket No.: 25491-2408B

Address all correspondence to:

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FORM PTO-1449

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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.	SERIAL NO.	CONFIRM NO.				
25491-2408B	10/645,816	Unassigned				
APPLICANT	CUSTOMER NO.					
Cantor <i>et al</i> .	24961					
FILING DATE 08/20/03	GROUP Unassigned					

# **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL			D	OCUM	IENT I	NUMB	ER		DATE	NAME	CLASS	SUB CLASS	FILING DATE
	Α	4	7	7	5	6	1	9	10/16/84	Urdea	435	6	10/04/88
	В	4	9	3	5	3	5	7	02/05/86	Szybalski	435	91	06/19/90
	С	5	0	0	2	8	6	7	03/26/91	Macevicz	435	6	10/24/88
	D	5	1	1	4	8	3	9	05/92	Blocker	435	6	05/26/89
	Е	5	1	7	4	9	6	2	12/29/92	Brennan	422	78	01/24/90
	F	5	2	0	2	2	3	1	04/13/93	Drmanac <i>et al.</i>	435	. 6	06/18/91
	G	5	4	3	6	1	4	3	07/25/95	Hyman	435	91.2	12/23/92
	Н	5	6	2	2	8	2	4	04/22/97	Köster	435	6	02/10/95
	ı	5	6	9	1	1	4	1	11/25/97	Köster	435	6	06/06/95
	J	5	7	9	8	2	1	0	08/25/98	Canard et al.	435	6	11/20/95
	κ	6	0	2	2	6	8	8	02/08/00	Jurinke <i>et al.</i>	435	· 6	05/13/96
	L	6	2	2	5	0	6	1	05/01/01	Becker et al.	435	6	03/10/99
	М	6	2	3	2	0	7	6	05/15/01	Schultz	435	6	02/04/00
	N	6	2	6	8	1	3	1	07/31/01	Kang et al.	435	6	12/15/97
	0	6	4	8	5	9	1	3	11/26/02	Becker et al.	435	6	10/02/00

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		D	осим	IENT N	NUMB	ER		DATE	COUNTRY	CLASS	Sub Class	Trans Yes	slation No
 Р	0	0	5	6	4	4	6	09/28/00	РСТ				
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R	8	7	0	4	1	6	5	07/16/87	PCT				
S	9	3	0	8	3	0	5	04/29/93	PCT		,		
Т	9	4	1	6	0	9	0	07/21/94	PCT				

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OIPA			Sheet 2 of 3
FORM PTO-1449 DEC 2 4 2003 \$2	ATTY. DOCKET NO. 25491-2408B	SERIAL NO. 10/645,816	CONFIRM NO. Unassigned
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S SUPPLEMENTAL NEORMATION	APPLICANT Cantor <i>et al</i> .	CUSTOMER N 24961	NO.
DISCLOSURE STATEMENT	FILING DATE 08/20/03	GROUP Unassigned	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER							COUNTRY	CLASS	Sub Class	Trans Yes	slation No
U	9	4	2	1	8	1	1	09/29/94	PCT			_	
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X English langAuage equivalent provided

OTHER ART (Including Author Title Date Pertinent Pages Etc.)

OTHE	R ART (Including Author, Title, Date, Pertinent Pages, Etc.)
×	Benner et al., "Identification of Denatured Double-stranded DNA by Matrix-assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry", Rapid Commu. Mass Spec., 9:537-540 (1995)
Y	Benner et al., "DNA Base-Pair Substitutions Detected in Double-Stranded DNA With Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry", Eur. Mass Spectrum., 1: 479-485 (1995)
Z	Brenner, "DNA fingerprinting by sampled sequencing", <i>Proc. Natl. Acad. Sci. USA</i> 86:8902-8906 (1989).
AA	Cantor CR, "Report on the sequencing by hybridization workshop," <i>Genomics</i> , 13:1378-1383 (1992)
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AD	Cosstick et al., "Synthesis and Poperties of dithymidine phosphate analogues containing 3'-thiothimidine", Nucl. Acid Res., 18(4):829-835 (1990)
AE	Derwent Abstract Dialog File No. 351 Acces. No. 7209274 for Japanese patent JP 63603007, published 11/02/88.
AF	Drmanac <i>et al.</i> , "Laboratory methods: reliable hybridization of oligonucleotides as short as six nucleotides," <i>DNA &amp; Cell Biology</i> 9(7):527-534 (1990)

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AG	Drmanac <i>et al.</i> , An algorithm for the DNA sequence generation from K-tuple word contents of the minimal number of random fragments, <i>J. Biomol. Struct. Dynamics</i> , 5(5):1085-1102 (1991)
АН	Köster <i>et al.</i> , "A strategy for rapid and efficient DNA sequencing by mass spectrometry," <i>Nature Biotechnology</i> 14: 1123-1128 (1996)
AI	Khrapko <i>et al.</i> , "An oligonucleotide hybridization approach to DNA sequencing," <i>FEBS Letters</i> 256(1-2): 118-122 (1989)
AJ	Liu <i>et al.</i> , "Use of a Nitrocellulose Film Substrate in Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry for DNA Mapping and Screening", <i>Anal. Chem.</i> , <u>67</u> :3482-3490, (1995)
AK	Pevzner, P., 1-turple DNA sequencing: computer anlysis, <i>J. Biomol. Struct. Dynamics</i> , 7(1):63-69 (1989)
AL	Szybalski, "Universal restriction endonucleases: designing novel cleavage specificities by combining adapter olideoxinucleotide and enzyme moieties", <i>Gene</i> , 40:169-173 (1985)
AM	Tang et al., "Matrix-assisted Laser Desorption/Ionization of Restriction Enzyme-digested DNA", Rapid Comm. Mass Spec., 8(2):183-186 (1994)
AN	Wu et al., "Time-of-Flight Mass Spectrometry of Underivatized Single-Stranded DNA Oligomers by Matrix-Assisted Laser Desorption", Anal. Chem., 66:1637-1645 (1994)

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